

per (R. U.)

REVIEW

OF THE

TESTIMONY OF PROF. WORMLEY,

IN THE

RICHARDSON CASE,

ON TRIAL AT

CANTON, OHIO.

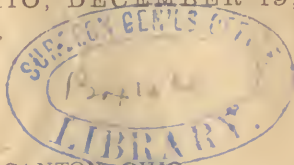
PREPARED BY

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FOR

THE USE AND BY ORDER OF THE DEFENDANT'S COUNSEL

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REVIEW.

GENTLEMEN :

In beginning a review of Dr. Wormley's extraordinary, ex cathedra statements, I remark that no one who deserves the name of a "man of science," should, or would, pronounce *absolutely* as it regards the *negative* of any scientific proposition. If he do so, so far he is of course unscientific—and in addition, would be subject justly, to severe scrutiny, as it regards his trustworthiness in giving a decision upon any subject whatever—no matter how long or carefully he may have studied with reference to such decision.

The whole habit of thought of such a man unfits him for such investigation. He must *select*, and restore and tinker natural organisms, before they are in fit condition for him to examine. In short, he must be allowed to bring all natural forms to his imaginary *perfect* standard, before he will even begin his *investigation*.

Thus with the blood corpuscles, they must be "restored" so that they will appear *perfectly* circular. Dr. W. did not see in the field in view, studded as it was with circular forms, as the heavens are with stars, but three which were thus *perfect* and therefore *fit* to be measured. I would not insist upon this *perfect* idea of the word as used by the Dr., had he not repeated it two or three times without qualifying it in the least degree.

Now, as all scientific men agree that blood corpuscles dried upon glass slides, undergo but little or no change in the process of drying, I may well say, that Prof. W. claims to more than God himself, as to what the form of a *perfect* corpuscle should be, in order to entitle it to the honor of passing under the Professorial measuring rule.

And further, what must be the state of the blood of a person whose corpuscles are in such an abnormal condition as that not more than one in five hundred is in a condition to be measured even.

Now, admit this for one moment to be the case, it certainly is favorable to the defendant's side of the question, for the Prof. himself admits they never expand in drying. So that it is clearly shown without resorting to the scale at all, that the large and

irregular corpuscles in the one table could not by any possibility have come from one and the same person as the beautifully rounded ones in the other table, that is those of Mrs. Richardson. Nor could the two kinds of blood ever have circulated in the veins of Mrs. Richardson, as every juror could himself testify, as well as any scientific man, however much he may claim to be Sir Oracle.

Every juror saw Mrs. R's blood at two distinct times under the microscope, and if there had been any of these deformed corpuscles mixed with the beautifully rounded and symmetrical forms, which they beheld there, they would not have needed any scientific schoolmaster to point them out. They would, of course have recognized them at a glance.

Dr. Richardson writes Dr. Danforth, "it is certainly wonderful how fully Dr. Piper, by his new method of measurement, agrees with all the received authorities. Dr. Wormley's measurements agreeing with his." President Frere and Prof. Danforth, say there is not the least possibility of doubt in the matter.

Nor is there an intelligent, unprejudiced man who can come to any other conclusion.

And what shall we say of one who himself, admitting the justness of my figures, deduced from twenty thousand measurements, shall deny the truth of my system, and shall say that although it has proved reliable in twenty thousand instances still in the very next one under investigation, it be pronounced valueless?

What strange darkening of the intellect, or of the moral perceptions do we see in such a case, and how is it possible to account for such anomalies in the workings of the human mind. Surely the physical deformity of the blood corpuscles in question is nothing to the deformity of the "*thought corpuscles*" which go to make up the intellectual life current of such a mind.

Before quoting authorities upon the subject, I would call attention to plate No. 1, containing two tables of *human blood*; one reproduced from a blood spot on a pearl shell, which was scraped off and brought in view precisely as was done with Richardson's blood, in the table exhibited, and also the beautiful partial table of Mrs. Richardson's, scraped from the shell. Here the one from the pearl shell measures 38.7 inches, the other from the glass slide 38.8 inches; and this drawing was made July 18th, 1876, and measured at that time, as recorded on the back. And this was not made for this occasion, but in my ordinary daily work, in order to fully and finally settle the question, not of the reliability of my method of measurement, for of this I have never had a doubt from the time of its first invention or discovery, but, in order to see if I

could solve the problem as between man and animals. Not thinking for one moment in solving this problem I should be able in many instances to solve the question as it regards individuals of the human family.

And now my second task becomes much easier than my first, as owing to the effects of many diseases in the blood, I am able to bring these appearances into view, which would in *this case* settle the question, did the two bloods measure precisely the same in both *individuals*.

Now, if my method is not right, how happens it that these two tables are so near alike? Is there anything in the doctrine of chances which would give a rule for bringing together by chance forty-nine such forms as these, putting them in position one by one in the first table until it is filled, and then forming the second one in the same manner, so that they measure almost exactly alike. Is there not as much a law here as in that which binds the stars in their courses and controls the movement of the seasons.

I scarcely need quote authorities in the case, as in the language of Tyndall, "the well instructed mind does not need such aids to accept self-evident truths. Still as all are not well instructed and those always the least, so who deny ex cathedra, no matter how great their names, I will give those to whom I have access with the remark that as yet not much seems to have been published on the subject."

Dr. Richardson says: (*London Microscopical Journal*, Sept. 1874.) "The experience of Prof. Letdy, and Prof. Wormley, accords with mine, that he has never seen the drying or remoistening of the red blood corpuscles cause them to expand. I therefore conclude we may affirm that when the corpuscles are *uncontracted* their indications remain perfectly reliable, and if they shrink, which I believe they rarely do, that is the only serious modification they can undergo."

But a simple experiment will serve to illustrate the matter. Prof. Reed sent me some dried blood for experiment, not informing me from what animal it was obtained. Some small particles of this blood was broken up into a fine dust with a sharp knife upon a slide, and covered with a thin film of glass. This was moistened by putting a drop of the salt solution near the edge of the cover from whence it was carried to the dried blood powder by capillary attraction. The slide was then placed upon the stage of the microscope and a magnifying power of 1250 diameters applied when a fragment of the blood stain was soon discovered which displayed the delicate cell walls of its component red and white corpuscles as figured in my "Hand book of Medical Microscopy," page 284. Ten *consecutive* corpuscles from these, *selected simply* among those which had become but little distorted were found to measure $\frac{1}{3407}$ of an inch as the

mean. From this data I came to the conclusion that this was human blood. On reporting this diagnosis to Prof. Reesse I had the satisfaction of learning that I was entirely correct.

Thus it will be seen in the face of such data as this Dr. Wormley declares there is no authorities who found their measurements upon anything but perfectly *circular* corpuscles.

Even more than this, Dr. Richardson says he chose as is my frequent practice in such cases, *consecutive distorted corpuscles*, and I have myself found in numerous instances where both well formed and quite irregular formed corpuscles are drawn from the same slide, there is very little if any variation in the measurement.

Plate 2. The oval corpuscles measure 18.3 inches, from the same slide the circular ones 18.2 inches. Both of these bloods or tables are from the same person.

Plate 3. In which there is not a single corpuscle fit to *measure* according to Wormley, from two different individuals, the two tables measure exactly alike, that is 19.7 inches $\frac{1}{3230}$ of an inch.

Plate 4. Shows the blood of two different dogs 56 corpuscles each. By my *chance* system of measurement these two tables come out precisely alike,—that is $\frac{1}{3571}$ of an inch. Gulliver giving $\frac{1}{3541}$ of an inch. Kolliper $\frac{1}{3567}$ as the average measurement of dogs blood. The difference between the result of my measurement and the last authority being the $\frac{4}{10,000}$ of an inch.

Plate 5. Two other tables of dogs blood, one measuring 39.7 inches, the other 39.5 inches.

Plate 6. Shows two tables of dogs blood, both setters, (one a puppy) measuring 39.8 inches and 40.0 inches respectively.

Now it is evident to any one that it would not be possible for the most skillful hand to pile up these 98 corpuscles, creating them in the process with no reflected form, to work from on the paper, and so show them as to have them come out as they do here. No artist would for one moment make such a monstrous claim, and yet if Prof. Wormley be correct I am constantly performing this feat from day to day. The absurdity of the thing must strike every one. If one were to construct a square at first it would be thus easy to fill it, but without these guiding lines it would be absolutely impossible. The outline in the supposed case would be regular, but here this is never the fact. Let any professor of them all try to make one of these tables varying the rows as it regards length in almost every case, and see if he could bring out any near agreement in the measurement between two of these tables. The highest Pickwickian philosophy has no rule by which such an end could be accomplished. And if so there must be a law underlying these results which proves my whole theory.

If by any art or management of mine I could not hope to make two rows equal on the two sides, how could I bring all these irregular rows into such accord as to make two tables measure alike. No degree of stupidity could fail to perceive the absurdity of such an idea.

Dr. Wormley declares there is no means known to science by which the blood of one individul can be told from that of another. Take the case of a man dying from Leucothesemia whom I saw just before coming here. Could not his blood be told from that of a healthy person, and is not the house surgeon of Rush Medical College doing this every week? This element of the appearance of blood corpuscles in cases of disease enters into my cases largely as it does in this of Richardson.

The deformed and strangely marked corpuscles never circulated in the same veins as the round and even ones seen in the other tables. If this fact be seen clearly it will settle the question with *absolute certainty*. It cannot be too often pressed.

Dr. Wormley says we cannot indicate disease by any condition of the blood. And Drs. Frere, Danforth and Piper, and even the house surgeon of Rush Medical College, are doing this every day, as are many other physicians there and in other places.

And Prof. Saulsbury, of Cleveland, is detecting many diseases by this means and thus paving the way to a rational mode of treatment. He has also published a most beautiful and valuable volume upon this subject, the plates in which are very interesting; and moreover, Dr. Richardson publishes many cases thus diagnosed and treated in his practice.

There is also Hollier, of Jenna.; Dr. Stiles, of New York; Dovaine, of Paris.

Dr. Richardson, quoting Dr. Salisbury's Hand Book, page 190: "Frequently before the patient has any idea that he is rheumatic, or in danger of being at any moment taken down with rheumatism, this condition may be positively diagnosticated by the appearance of the blood." And so author after author may be mentioned.

Where has Dr. Wormley been sleeping all these years that he has never heard of these authors? Certainly this is the height and depth of Rip Van Winkelism.

As I have said before, diseased blood which is so common in even apparently healthy persons must and often does become an important factor in diagnosing the difference in the blood of two persons. Thus in the present case the blood of Richardson could be told from that of his wife by that criterion alone. And this will at once be recognized by every intelligent person.

How absurd even to intimate that by any conceivable chance the darkly furrowed and oval corpuscles, could by any distortion of the reasoning powers be *confounded* with those of the wife.

Dr. Wormley does not question the accuracy of my drawings he should have done so in order that his dictum should be deemed worthy to receive the *least attention*.

Dr. Salisbury, in his work on blood, gives a list of morbid states of the blood, 67 in number, either of which would enable us to distinguish between the blood of two persons with unerring certainty, and to this list he says might be added many more. Indeed, so prevalent is disease in some form latent or manifest in every human being, that it is questionable whether we could not distinguish a large majority of persons in this way.

There is certainly no difficulty in the present case.

There are other errors in Dr. Wormley's statements, such as the one in regard to the results of the fractional difference in micrometers, which I have not time to notice on account of the haste in which you require this review. This want of time must serve also as my excuse for any verbal error or irregularity of form which may occur therein.

Dr. Wormley's testimony is taken from the full report made by the short-hand reporter, and as it agrees with my own notes also, it cannot fail, I think, to be fully reliable.

Your obedient servant,

R. U. PIPER, M. D.

To MESSRS. MCSWEENEY, MEYER, and PEASE & RICKS.